
Module 4:

Getting Ready: Scoping the RI/FS

Module Objectives

- ❑ Explain the purpose of the scoping phase of the RI/FS
- ❑ Identify existing data which can support RI/FS scoping, and evaluate its usefulness
- ❑ Given sources, release mechanisms, pathways, and receptor data for the site, develop a basic conceptual site model
- ❑ List when limited field investigation would be appropriate to support RI/FS scoping
- ❑ Explain how EPA Superfund program expectations impact DOE RI/FS projects
- ❑ Define data quality objectives and explain their importance to data collection planning
- ❑ List the typical contents of an RI/FS project plan
- ❑ List EPA recommendations for improved RI/FS planning

Scoping Activities

- ❑ Initial process of RI/FS
 - Repeated as needed throughout (for other operable units)
- ❑ Establish site objectives
- ❑ Implement site management strategy
 - Site boundaries
 - Sequence
 - Operable units
- ❑ Implement any OU strategies, such as use of a phased approach

Scoping Activities (cont'd)

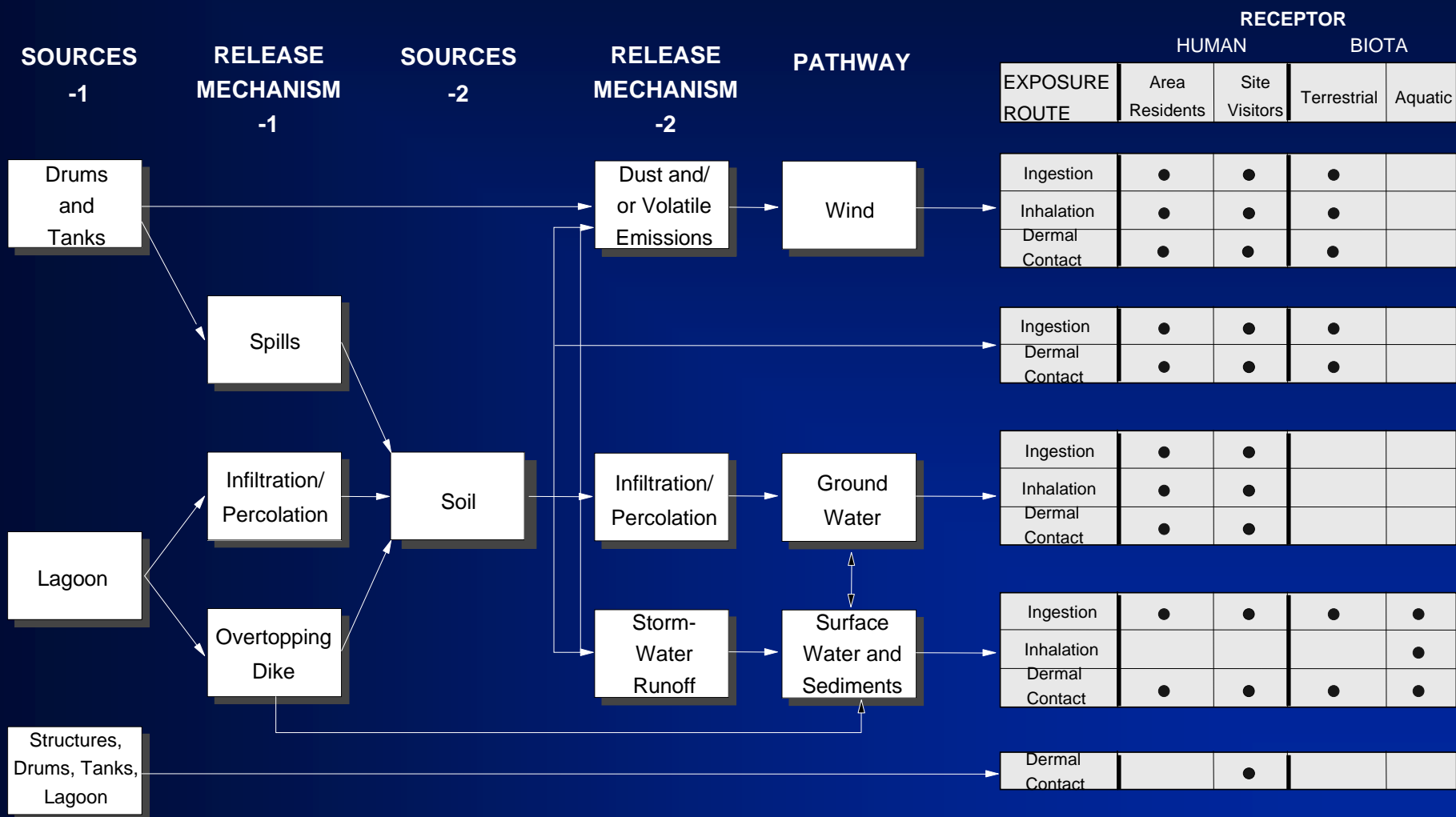
- ❑ Evaluate existing data
 - Use previous surveys, documents
- ❑ Involve federal, state regulators
- ❑ Develop conceptual site model
- ❑ Identify management strategy, likely response scenarios, and remedial action objectives
- ❑ Initiate potential state/federal ARARS identification
- ❑ Identify initial data quality objectives (DQOs)
- ❑ Prepare project plans

Evaluate Existing Data

- ❑ Identify types of existing data
- ❑ Identify sources of existing data
- ❑ Use of existing data helps to:
 - Establish physical characteristics of the site
 - Develop conceptual site model
 - Determine additional data needs
 - Avoid duplication of previous efforts
 - Focus RI/FS
 - Worker health and safety planning

Getting Ready: Scoping the RI/FS

Develop Conceptual Site Model



Limited Investigations

- ❑ Conduct if available data are not sufficient to scope the project adequately
- ❑ Limited to easily obtainable data where results can be gathered in a short time
 - Geophysical survey
 - Sampling and analysis of existing wells
 - Well-water level measurements
 - Air monitoring
 - Site mapping

Site Management Planning

Based on Existing Information and Conceptual Site Model:

- ❑ **Identify initial remediation priorities and appropriate implementation sequence to address site problems**
 - Operable units
 - Early/interim actions
- ❑ **Identify appropriate scope and detail of studies needed to define site problem**
- ❑ **Identify potential remedial technologies and need for treatability studies**

Program Expectations

- ❑ **Focus on the protection of human health and the environment through a variety of methods**
- ❑ **Are to be considered and utilized during scoping and will influence the establishment of remedial action objectives and potential remedial alternatives**

Program Expectations (cont'd)

- ❑ **Treatment of principal threats will be used, wherever practicable; principal threats may include liquids and highly mobile or highly toxic materials**
- ❑ **Engineering controls may be used for waste that poses a low long-term threat, or where treatment is impracticable**
- ❑ **Institutional controls, such as deed restrictions, will be used to mitigate short-term impacts or to supplement engineering controls; they will not serve as a sole remedy unless active response measures are impracticable**

Program Expectations (cont'd)

- ❑ Remedies will often combine treatment of principal threats with engineering and institutional controls for treatment residuals and untreated waste
- ❑ Innovative technologies should be considered if they offer the potential for comparable or superior treatment performance, fewer/lesser adverse impacts, or lower costs for a similar level of performance than demonstrated technologies
- ❑ Ground water will be returned to its beneficial uses within a timeframe that is reasonable, where practicable

Initiate ARAR Identification

- ❑ **DOE should work with lead and support agencies to initiate identification process early in process**
- ❑ **Initial focus on chemical- and location-specific requirements and presence of RCRA-regulated waste**

Develop Data Quality Objectives (DQOs)

- ❑ **Assure all data needs are identified in project scoping**
- ❑ **Type and quality of data needed based on intended use of data**
- ❑ **7-step DQO process developed by EPA's Quality Assurance Management Staff**

Prepare Project Plans

Typical Project Planning Deliverables Include:

- ❑ **Work plan (WP)**
 - **Should also address management of investigation-derived waste**
- ❑ **Sampling and analysis plan (SAP)**
 - **Field Sampling Plan (FSP)**
 - **Quality Assurance Project Plan (QAPP)**
- ❑ **Health and safety plan (HASP)**
- ❑ **Community relations plan (CRP)**

Communication During Scoping

- ❑ DOE, EPA, and the state meet to discuss site management strategy
- ❑ DOE initiates discussion of ARARs with EPA and the state
- ❑ DOE prepares work plan, working closely with EPA and the state
- ❑ DOE and EPA begin dialogue with community to develop community relations plan and notifies community of completed project plans

Improved Project Planning

EPA Recommendations:

- ❑ Increase use of existing data, particularly site inspection data
- ❑ Conduct limited investigation, when appropriate
- ❑ Incorporate technical advisory committee review into project planning phase
- ❑ Integrate DQOs into planning process

Improved Project Planning

EPA Recommendations (cont'd)

- ❑ Use RI/FS 14 standardized tasks - listed in Appendix B of guidance
- ❑ Consolidate planning documents/incorporate standard procedures by reference
- ❑ Communicate on regular basis with all involved parties to reach early consensus on project approach

Module Summary

- ❑ The purpose of scoping is to plan for data collection and review, site planning and other initial steps of the RI/FS process
- ❑ Scoping activities include
 - Evaluating existing data
 - Involve federal, state regulators
 - Develop conceptual site model
 - Identify management strategy, likely response scenarios, and remedial action objectives
 - Initiate potential state/federal ARARs identification
 - Identify initial data quality objectives (DQOs)
 - Prepare project plans

Module Summary (con't)

- ❑ **Scoping activities must focus on meeting program expectations as these activities will influence the establishment of remedial action objectives and potential remedial actions**
- ❑ **DQOs are data maps that assure all data needs are identified during project scoping**